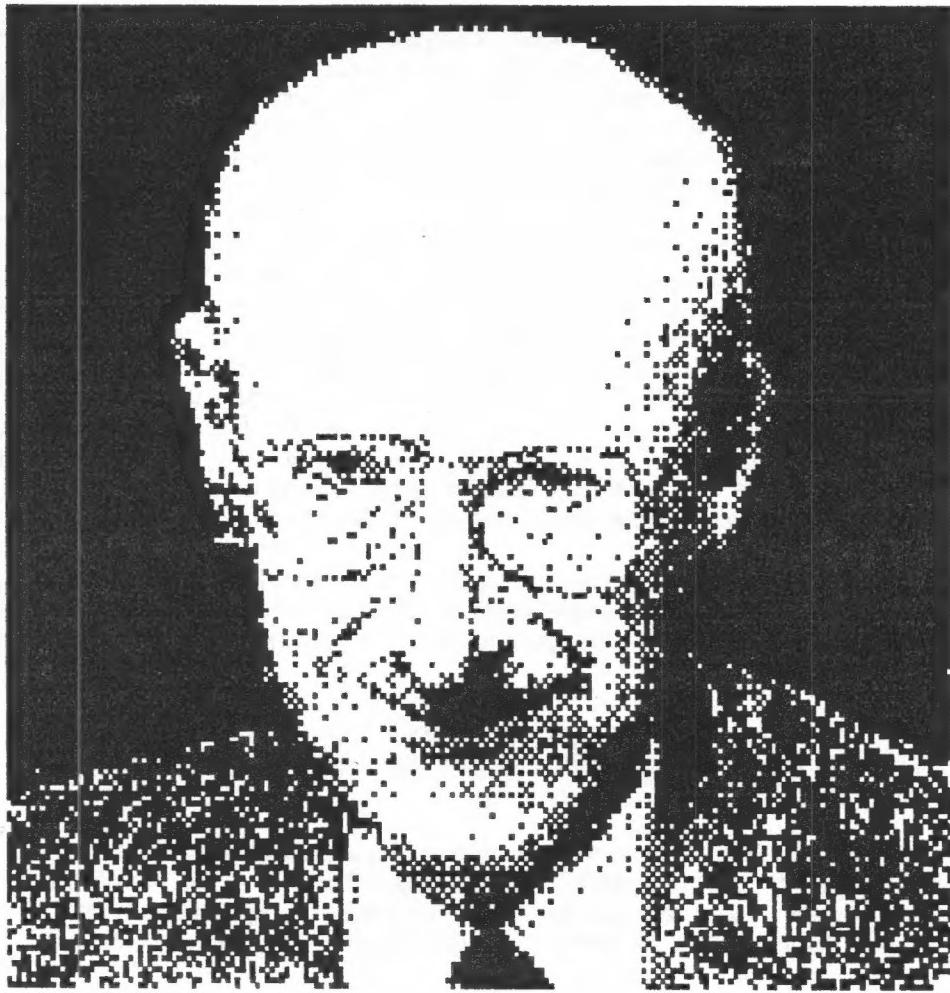


THE RAMTOP

Published by the Cleveland Timex Sinclair Users Group

Fall

1993



Inside This Issue:
JLO ROM Upgrade
RS 232 Secrets
Spectrum Emulator Reviewed

The President's Message

Hello to all of you! Hope you are feeling well. I am doing OK. I hope you were at the Dayton Computerfest! This was the first year that I was able to go and let me tell you, it was PACKED! There had to be over 25,000 people go through that place! Since I was not there in the past years, I can't compare it to those years but I was impressed! I just wish I had more money to spend. This year I spent a big buck on the Compaq notebook computer and the extra battery and modem. Maybe next year I can get that printer that I need. Anyway, the show was great! I was not too surprised to see that much of the fest was aimed to the IBM world. In fact, there were so many vendors selling CD ROMs! All the popular computers were represented. Amiga (Commodore) had a large area.



Timex-Sinclair was represented tool Paul Holmgren and Frank & Carol Davis from the ISTUG group (Indiana Sinclair Timex Users Group) were both there with much to sell! They had a lot of software for QL (including many current programs and games from Belgium, Germany, and England), 2068, Spectrum, and the 1000. They also had a lot of hardware for sale. Other groups were represented. These were: CATUG (Chicago Area Timex Users Group) Bob Swoger, Demoed LOGICALL which is a menu/utility program for the Larken Disk system for the 2068. SMUG (the Milwaukee users group) was there. TSNUG (Timex Sinclair of North America Users Group) was represented by Don Lambert. Tim Swenson who publishes the QL Journal was there. Jon Kazor from our group was able to talk to Jeff Taylor and Hugh Howie from the Toronto Users Group. Of course there was Gary Gangler of the Dayton users group showing off his large collection of Timex computers as well as many other types of systems including Amstrad.

One table across from the TS area had two of the original Commodore PET computers! I remember seeing these computers in the Olsen stores several years before the Sinclair came out with the ZX-80 or ZX-81. I don't remember what the cost was for these computers then but I know it was way beyond what I could afford.

There was a great flea market area. If you wanted to find components, accessories, cables, cases, disks, cheap drives, and just about anything else you could imagine, you should have been there! That is where I did most of my spending.

Now for some serious stuff. As you know, we have wandered away from a structured meeting. I would like to get back to a meeting that will bring as much information as possible to all of us. I would also like to have at least one demo of some kind at each east side meeting. Any input you have will be greatly appreciated! I would like the meeting to run much as it did several years ago. This would be something like this:

- 1- Help bring in any equipment and set up as required and greet any new people!
- 2- Recap anything of importance from the last meeting.
- 3- Report from our Treasurer
- 4- Give each member a chance to inform us of any news they may have.
- 5- Have a demo of something related to computers!
- 6- Have a good time!

The Wonderful World of Serial Ports

With the Intriguing Addition of 9 pin Connectors to Help One Become Confused in Their Connections With a 25 Wire Cable.

The Port is called a RS232C Standard. The 'normal' connector for RS232 has been the DB25 which can be either a plug with pins or a socket. Male or Female. This basic description represents a sexist attitude! To add further to the confusion, the old standby Parallel Port connector which had 36 wires has now become a DB25 Female Socket on microcomputers. They have helped a bit by making the Serial Ports into Male sockets, even though they have opted to make them either 9 or 25 pins. Most of the recent computers use the 9 pin version.

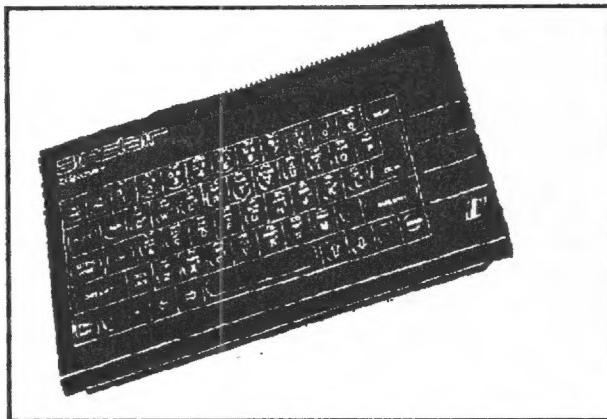
The CGA color video and the monochrome also used the DB9 plugs too. But this port is usually marked VIDEO. And some of the JOY STICKS used the 9 pin too. But most of the GAME PORTS are different now as

Spectrum Emulator

REVIEW OF THE Z80 SPECTRUM EMULATOR WRITTEN BY GERTON LUNTER

by James G. DuPuy:

I want to take a few paragraphs to tell you about a program that is a MUST for your PC. (IBM or Compatible) It is the Spectrum (48 and 128) emulator. This program will allow you to run ALL of the Spectrum programs that you used to run on your old TS-2068 with the Spectrum ROM or one of the hardware devices that would allow you run Spectrum software. This emulator actually is more compatible than the 2068 was with the Spectrum ROM. There are some really fantastic features with this emulator over many if not all of the others. Here are my first impressions: First of all, the it is very user friendly! As you know, there are no Spectrum



legends on the keys. This emulator is so user friendly that all you need to do is press ALT-F1 and there you have a complete graphic representation of the Spectrum keyboard! You can do this whenever you want without it effecting what you are doing. Another super feature is that a schematic is included to make the interface required to load and save cassette tapes! Don't worry, this interface is passive and only requires about 8 or 9 components all resistors, capacitors and a pot. It plugs into the parallel port. I made one and it works just great! You load the programs just as you always did, that is: LOAD "". Once you load the program, you press the F10 key and pick S for save (or just press F2 for save) and type a path and name (DOS so only 8 characters) and it will be saved to disk. This was a real help to me since I had many old Tasword files and no way to print them with the PC. Now I can load the emulator, and load in the cassette text file then print it to a disk file or to the printer. You can redirect output as you want. The emulator also emulates many other things such as Interface 1 and 2, Samram, Kemston and several other joystick interfaces, and more! My first impression is that it is the best I have seen and more than worth the \$20 that is asked for the program.

The programmer, Gerton Lunter, really put a lot of time and a LOT of thought into this software. It can even run under Windows 3.0 or 3.1. The PIF file and ICONs are included! It will run on just about any PC but I would recommend you use a 286 16mb or better. I loaded it on my Compaq Contura 486/cx and it runs at up to 286%. It runs at about 76% on my old 12mb 286. When you load the emulator it comes up with a nice title page and then you see the familiar blinking "K". You are given many choices when using this emulator. If you have a joystick connected, you can have it work as one of several different joysticks that were popular for the Spectrum. If you don't have a joystick, no problem, your cursor keys can be used as cursor keys or all of the same joysticks! (GREAT for laptops!)

You can change the speed of the emulator for the fastest down to whatever you want. You can pick either 48K mode or the Spectrum 128 mode. Since I have never seen the 128, I can't say much about it. I do know that there were a lot of GREAT games for both computers! I have a ton of Spectrum games and most load with no problem. Some need for you to use what is known as "real mode" and have the speed as close to 100% as possible. (the speed sensitive and headerless types) I have loaded just about all my games and all my old Tasword files and I can only tell you, you have to get this emulator!

More Emulator Info

Here is some information on the latest PC-Spectrum emulation program, which emulates both a 48k and 128k Spectrum. What follows comes from the documentation of the program. It is on CIS in UKCOMP Lib2 and I have uploaded it to the ADG BBS in AKRON 216-864-2948.

The shareware version of the emulator program is not fully functional. It cannot be slowed down, and it can't load programs from tape. All other functions work the same in both versions. If you register, you will receive the fully functional emulator together with the following utilities:

CONVERT - a general conversion program: can list out BASIC and translate it back, produce .GIF or .PCX files from screendumps, translate Spectrum ASCII (CR) to PC ASCII (CR/LF), and some other things.

CONVZ80 - Translates various snapshot and tape formats of other Spectrum emulators into each other.

More Info Continued

Can handle Arnt Gulbrandsen's (JPP) .SNA format, Pedro Gimeno's (VGASPEC and SPECTRUM) .SP format and Kevin J. Phair's (SPECDEM) .PRG format. It can also handle tape files of SPECDEM and L. Rindt and E. Brukner's emulator ZX.

DISCIPLE - Reads DISCiPLE and Plus D diskettes, both 3.5" and 5.25". It translates the 48K and 128K snapshot files to .Z80 snapshots, and ordinary files and screen snapshots to .TAP tape files.

Z802TAP - Converts a .Z80 snapshot, 48K or 128K, to a .TAP file which can be loaded into the emulator and saved to tape by the next utility:

TAP2TAPE - Saves the contents of a .TAP file back to tape, to load it into an ordinary Spectrum.

Z80DUMP - Shows the contents of the header of a .Z80 file.

You will also receive the source files of the emulator, the above utilities and the SamRam, and you'll be kept informed about future updates.

The registration fee is 20 US\$, or 15 British pounds, or 35 German Marks, or 35 Dutch guilders, or some of your local (hard) currency of about that amount. Now there are several way to get the money to me. In order of preference:

1. Simply send banknotes.
 2. From Europe, send a Eurocheque of HFL 35,-
 3. Send a postal money-order (Works fine from e.g. Italy and Spain)
 4. Send a bank cheque. Please add the equivalent of 20 Dutch guilders, for that's the amount the banks charge for drawing foreign cheques.
- Send the money, together with your name and address to:

Gerton Lunter
P.O. Box 2535
NL-9704 CM Groningen
The Netherlands

You'll get the files on a 3.5" DD disk by default, but you can also get in on 5.25 inch disks if you want. Registrations can also be handled by B G Services in the UK if this is more convenient. The cost is the same (15 British pounds). Payment can be by cheque or postal order made payable to B G Services. The address is:

B G Services
64 Roebuck Road
Chessington Surrey KT9 1JX

Telephone enquiries on 081 397 0763, Fax 081 391 0744.

There are several other Spectrum emulators, both

for the PC and other computers. The list below is partly due to Carlo Delhez (the QL emulators) and partly copied from Arnt Gulbrandsen's documentation of his JPP. I don't think the list is complete, so if you know more Spectrum emulators, for any computer, please let me know.

For the PC:

- o **JPP**, by Arnt Gulbrandsen (Norway). Faster than mine (but according to an OUTLET review slower on some boards), by using a very smart decoding technique, but requires a 80386 or '486 processor. Is less compatible than Z80. Uses the .SNA snapshot format. Needs VGA. Not many extra features. (Ed's note, available on CIS UK-COMP LIB2)
- o **VGASPEC**, by Alberto Olloqui (Spain). Needs VGA and 80286. Quite slow, and crashes on quite a lot of programs. Uses the .SP snapshot format. Allows ROM pokes. This program is an illegal pre-release of SPECTRUM, by Pedro Gimeno.
- o **SPECTRUM**, by Pedro Gimeno (Spain). Uses another .SP snapshot format. Has a tape interface. Also quite slow. Allows changing the rom.
- o **SP**, by J. Swiatek and K. Makowski (Poland). Cannot load or save snapshots, but can load programs using LOAD "" via a file called TAPE_ZX.SPC. Crashes many programs; even basic behaves weird sometimes. Has a built-in monitor, but no documentation. No border.
- o **SPECDEM**, by Kevin J. Phair (Ireland). Also allows rom changes. Displays the registers on screen. Can save and load directly from disk using LOAD/SAVE "filename" in BASIC. Loads .PRG snapshots, but cannot save them. Emulates a Multiface I.
- o **ZX**, by L. Rindt and E. Brukner (Czech Republic). Haven't tested its compatibility thoroughly, but one of the games supplied didn't respond well to the keyboard, while it did work on Z80 after conversion. Good tape file support including headerless files, almost identical to the multiple .TAP file mode of Z80. Somewhat slower than Z80. Includes program to load from tape and convert to tape file. No documentation at all.

For the Sinclair QL:

- o **SPECTATOR** by Carlo Delhez, The Netherlands; shareware; supports tape-files, Microdrives, RS232, Z80 snapshots, MBF snapshots and Disciple (SNP) snapshots; utilities to convert Disciple, Beta and Opus disks enclosed.
- o **ZM-1/2/3/4** by Ergon Development, Italy; ZM-1 is shareware, ZM-2/3/4 are commercial. They all support tape-files and Z80 snapshots, some support Microdrives and RS232; contain a utility to transfer programs from tape via a Spectrum to the QL.
- o **ZX** by Andrew Lavrov, CIS; shareware; supports tape-files, MBF snapshots en Z80 snapshots; utility to read from Spectrum tapes (and write them).

More Info Continued

Spectator, ZM-1 and ZX are all about as fast (approximately 30 to 40% on a 16 MHz MC68000 machine). ZM-2/3 are faster, but this at the cost of compatibility. ZM-4 is not an emulator, but a real-time Z80-compiler: very fast and seems to be compatible as well.

For the Amiga:

- o **Spectrum**, by Peter McGavin. Very good, JPP is based to a large extent on it. Needs about a 25MHz machine to run at full speed. Has tape support o KGB. I haven't seen it. A bit slower than Peter's, and the version Peter saw wouldn't work on the Amiga 3000. o An Italian emulator which I don't know the name of. Excellent compatibility, rather fast. May be shareware. o Several unreleased emulators. Peter knows more about them.

For the Atari ST/TT:

- o **One, called Spectrum.** Don't know anything about it, but the doc file is written in quite the worst English I've seen. [This is Arnt speaking --- I've seen worse! GAL] Available by anonymous ftp from terminator.cc.umich.edu.
- o There's another one in the make, to be released very soon as one of the programmers told me, written by Markus Oberhumer and other(s).

For the Acorn Archimedes:

- o **A company called Arxe** wrote one, intended to be commercial but never released because Amstrad wouldn't permit Arxe to enclose the ROM. o Someone called D. Lawrence wrote another, or maybe the same. This one is floating around but nobody has any documentation. I don't know what its status is. Runs at about 70% of Spectrum speed on an ARM2, not quite perfect graphics emulation.

- o **There is a PC emulator for the Archimedes...**

For the Commodore 64:

- o **The Whitby Software Spectrum simulator** is a rewrite of the Spectrum Basic. It will not run machine-code programs. I don't know whether it's PD, shareware, or commercial. Quite good. (Responds nicely to a POKE 23659,0)

All emulators for PC, and some for the Atari, Amiga and QL are available on the support BBS. There are also emulators available for the ZX81. Carlo Delhez, who also wrote a Spectrum emulator for the QL, wrote the ZX81 emulators XTricator (for the QL) and XTender (for PC's). These programs can also be downloaded from the support BBS.

For Spectrum software, utilities, other emulators for PC's as well as other computers, and other Spectrum related software, you can call the Spectrum Emulator support BBS in Groningen:

Tatort BBS Groningen

050-264840

(+31-50-264840)

**v22, v22bis, v32, v32bis, MNP2-5, v42, v42bis
(300-14400 baud)**

At the time of writing the BBS is open 24 hours a day, but this is subject to change. Please try calling between 22:00 and 9:00 local time first.

If you have access to **Internet**, you can find several Spectrum emulators in a directory of for instance wuarchive.wustl.edu (take a look in /systems/sinclair and /msdos/emulators) or nic.funet.fi. And if you want to get in touch with Gerton Lunter, his email address is **gerton@rcondw.rug.nl**.

Well there is nothing like a European telephone call to get you try out that new high speed modem you just purchased. So if you missed it at our meeting get ready to go nuts!

Serial Ports Continued

are the VGA Video Ports.

Here are the pinouts of the 9 pin and 25 pin connectors as used in the RS232C configuration for a serial port:

For DB9 connector

Pin	Function
1 CD	Carrier Detect
2 RxD	Receive Data
3 TxD	Transmit Data
4 DTR	
5 SG	Signal Ground
6 DSR	Data Set Ready
7 RTS	Request To Send
8 CTS	Clear To Send
9 Ring Indicator	
22 CE	Ring Indicator

For DB25 Connector

Pin	Function
1	Frame Ground
2	TxD Transmitted Data
3	RxD Received Data
4	RTS Request To Send
5	CTS Clear To Send
6	DSR Data Set Ready
7	SG Signal Ground
8	CD Carrier Detect
20	DTR Data Terminal Ready
22	CE Ring Indicator

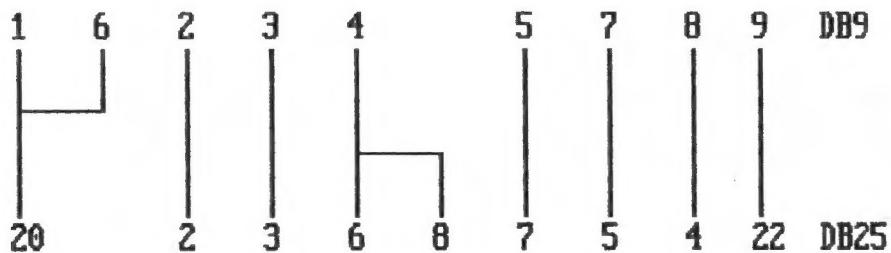
If you will note the pin numbers and functions differ from one of the connectors to another.

For DB9 connector

Pin	Function	Pin	Function
1 CD	Carrier Detect	8 CD	Carrier Detect
2 RxD	Receive Data	3 RxD	Received Data
3 TxD	Transmit Data	2 TxD	Transmitted Data
4 DTR	Data Terminal Ready	20 DTR	Data Terminal Ready
5 SG	Signal Ground	7 SG	Signal Ground
6 DSR	Data Set Ready	6 DSR	Data Set Ready
7 RTS	Request To Send	4 RTS	Request To Send
8 CTS	Clear To Send	5 CTS	Clear To Send
9 Ring Indicator		22 CE	Ring Indicator

The pin 1 on the 25 pin connector, Frame Ground was not used.

To make a null modem cable with a 9 pin to a 25 pin use these pin assignments.



Here's what the wires actually connect:

9 pin		25 pin
1	Carrier Detect	20 Data Terminal Ready
6	Data Set Ready	
2	Receive Data	2 Transmitted Data
3	Transmit Data	3 Received Data
4	Data Terminal Ready	6 Data Set Ready
5	Signal Ground	7 Signal Ground
7	Request To Send	5 Clear To Send
8	Clear To Send	4 Carrier Detect
9	Ring Indicator	22 Ring Indicator

A nine to nine pin Null Modem Cable would connect like this:

1—Carrier Detect	4 Data Terminal Ready
6—Data Set Ready	
2—Receive Data	3 Transmit Data
3—Transmit Data	2 Receive Data
4—Data Terminal Ready	1 Carrier Detect
	6 Data Set Ready
5—Signal Ground	5 Signal Ground
7—Request to send	8 Clear to send
8—Clear to send	7 Request to send
9—Ring Indicator	9 Ring Indicator

Upcoming Events: December 3, 1993

Annual Christmas Party, Auction and Swap Meet. Bring your Computer related items to this meeting. Members of other groups welcome. This is the meeting to attend for the years best bargains. Euclid Square Mall, off Interstate 90, Babitt Road Exit, 7:30 PM in Euclidian Room. Volunteers needed to help with refreshments

JLO Rom Upgrade Review

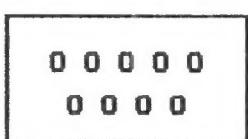
The new Olinger system ROM (V.2.65 now) is another step forward for what must be the most trouble free DOS for the 2068. John has added a couple of very interesting routines, a wide screen directory like MSDOS's DIR/w, a load and run mc command and a call mc routine which will call a routine once loaded. He has also moved the parking track of the disk from track 0 to track 1. This is to prevent fewer unrecoverable disk mishaps. The new commands are as follows CAT /W; RUN/"file" code;GOSUB/ (recalls the loaded mc routine). I haven't had quite the time to use my 2068 as much as I would like but the new commands do work and I am trying to find a way to use them in some of my many unfinished programs. The up-

grade is only \$10 if you send in your old EPROM. John still has all of his hardware available for the 2068. You can write to **John Olinger at 11601 Whidbey Drive, Cumberland, IN 46229**. JLO Safe DOS continues to be one of the best products on the market today for the 2068 because of ease of use and the openness of the system. Version 2.65 has reinforced that view.

We need articles and reviews for the Ramtop. Other publications are free to reprint anything from our newsletter as long as it is properly attributed. **The RAMTOP** is a newsletter dedicated to the interests of Sinclair Computer enthusiasts, no matter what computer they now may be using. We will try to support all machines, but we **need** your contributions.

To help prevent the problems that I have had, (getting the pin numbers mixed up), here are some pictures that will help.

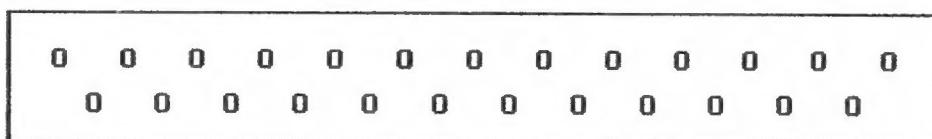
1 2 3 4 5



The DB9M and DB25M connectors are shown looking at the pins.

6 7 8 9

01 02 03 04 05 06 07 08 09 10 11 12 13



14 15 16 17 18 19 20 21 22 23 24 25

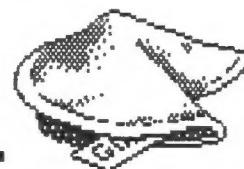
The Ramtop

Fall 1993

Is published quarterly by the Greater Cleveland Timex Sinclair Users Group

Thomas Simon, Editor
Ted Knyszek, Production
Jon Kaczor, Distribution

Please send editorial contributions and correspondence to
615 School Ave., Cuyahoga Falls,
Ohio 44221



Some Resources

ZX Clive Alive!
1301 Kiblinger Place
Auburn, Indiana 46706

Format
34 Bourton Road
Gloucester, England GL4 0LE

The ZX Spectrum 48/128 Emulator For IBM & Compatables: Z80 Version 2.01

Turn your PC into a real ZX Spectrum 48/128!
The fastest, most compatible and most complete
emulator available! Main features:

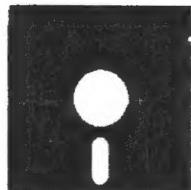
- Full Spectrum emulation, border, beeper, Interface I, Microdrive in cartridge file, RS232 input and output redirection to file, COM or LPT, joystick support, 128K sound through Soundblaster or internal speaker, built-in monitor,
- Able to load ANY, even protected or speed-saved program from tape, to save to tape, to redirect tape loads and saves to disk for easy file access,
- 2500 line English documentation, frequently-asked-questions file, PostScript file of doc, keyboard help screen, utilities to convert Spectrum screens to GIF and .PCX files, convert snapshot files and tape files from 5 other Spectrum emulators to own format and vice versa, to read DISCIPLE and +D disks,
- Z80 processor emulation including R register, unofficial instructions, unofficial flags,
- Runs okay under DOS, Windows and DesqView,
- Full source code of emulator and utilities included!

Runs on any 640K PC; too slow for practical use on PC/XT's but fast enough on AT's; runs at about 100% on 16MHz AT's (can be slowed down on faster machines), uses VGA/EGA/CGA or Hercules.

This program costs US\$ 20. You will receive a 3.5" DD disk (5.25" disks on request), and you'll be kept informed about updates. Please send bank notes, name and address to:

Gertjan Lunter
P.O. Box 2535
NL-9704 CM Groningen
The Netherlands

If you send a cheque, please add US\$ 15. Please allow 4 weeks for delivery.



The Ramtop
4568 Williamston Ave.
Brooklyn, Ohio 44144

